

APPARATUS FOR FORMING A GLUE PROFILE FOR BLOCK BOTTOM  
BAGS

1. Apparatus (30, 100, 200) for forming a glue profile for gluing the bottom sheets (2) and/or folded bottoms (1) of tube portions which (1, 2) [sic] are used for forming block bottom bags (19),  
whereby the device (30,100,200) comprises the following features:
  - at least one first glue reservoir (101) or at least one glue input (111a,b) from which glue is supplied,
  - glue lines (110) which transport glue to the gluing locations,
  - a number of glue valves (32) which are to open and close individually, the glue profile (4) being definable based on the selective opening of the valves (32);
  - glue outputs (71) which are allocated to the valves (32);
  - at least one second glue reservoir (102), which communicates with at least two valves (32);
  - a pressure reservoir (103) by means of which the second glue reservoir (102) can be pressurized.
2. Apparatus according to claim 2,  
characterized in that  
the pressure reservoir (103) comprises a compressible medium – preferably a gas such as air – which is under pressure.
3. Apparatus according to claim 1 or 2,  
characterized in that  
the pressure reservoir (103) comprises at least a third glue reservoir (103), in which the glue is under a higher pressure than in the second reservoir (102).
4. Apparatus according to claim 3,  
characterized in that

at least one third glue reservoir (103) is disposed between the first (101) and second (102) glue reservoir in the direction of glue transport.

5. Apparatus according to claim 4,  
characterized in that  
the at least one second glue reservoir and the at least one third glue reservoir are connected to one another by means of a pressure regulator (105).
6. Apparatus according to claim 5,  
characterized by  
a pressure regulator (105) which comprises a valve with which the connection between the second and third glue reservoirs can be opened and closed, whereby the opening time and closing time of the valve are each shorter than 5 ms.
7. Apparatus according to claim 4, 5, or 6,  
characterized in that  
at least one pump (106) is provided between the first (101) and third glue reservoir (103), which pressures the glue into the third glue reservoir (103).
8. Apparatus according to one of the claims 4 to 7,  
characterized in that  
the third glue reservoir (103) also communicates with a pressure reservoir.
9. Apparatus according to one of the claims 3 to 8,  
characterized in that  
the at least one third glue reservoir comprises several glue pressure levels connected in series.
10. Apparatus according to one of the preceding claims,  
characterized by  
- at least one depressurization valve (122),

- which is in direct contact with the second glue reservoir (102) and with which the pressure in the at least one second glue reservoir (102) can be reduced.
11. Apparatus according to claim 10,  
characterized in that  
the at least one second glue reservoir can be depressurized to atmospheric pressure by means of the at least one depressurization valve (122).
  12. Apparatus according to one of the preceding claims,  
characterized in that  
besides the glue supply system (101, 102, 103, 105, 106, 110) which conducts glue in the direction of the valves (43), a glue discharge system (114) is also provided, which allows the discharge of glue by the valves (32) without the glue passing through the valves (32).
  13. Apparatus according to claim 12,  
characterized in that  
a glue circulation and/or glue exchange in the apparatus (100, 200) can be performed by the interaction of the glue supply system (101, 102, 103, 105, 106, 110) and the glue discharge system (114).
  14. Apparatus according to one of the claims 3 to 13,  
characterized in that  
a pressure meter (132, 133) is provided at least at one of the following locations:
    - at the second glue reservoir (102),
    - at the third glue reservoir (103).
  15. Apparatus according to one of the claims 2 to 9,  
characterized in that

the at least one second glue reservoir is provided with an additional supply and/or drain (119) through which a cleaning medium like water or compressed air can be conducted.

16. Apparatus according to claim 8 or 10,  
characterized in that  
glue (131) and/or water vessels (130) are provided, in which exchanged glue or used water which is discharged from the glue supply system can be collected.
17. Apparatus according to one of the preceding claims,  
characterized in that  
the at least one first glue reservoir (101) or the at least one glue input (111a,b) from which glue is supplied comprises a glue agitator in which components of starch glue – such as starch and water – can be placed and stirred into starch glue.
18. Method for forming a glue profile for gluing the bottom sheets (2) and/or folded bottoms (1) of tube portions which (1,2) are used for forming block bottom bags (19),  
comprising the following features:
  - glue is supplied to a glue transport system (101, 102, 103, 110, 111) via at least one first glue reservoir (101) or at least one glue input (111a,b),
  - glue is transported in the [sic] (101,102,103,110,111) to the gluing locations by glue lines (110),
  - valves (32) are driven which extrude the glue onto the bag components (1,2) through assigned glue outputs (71),
  - whereby the driving is selective, so that a glue profile (4) is defined,
  - whereby the glue, in passing through the glue transport system, first passes a third glue reservoir (103) and then a second (102), whereby the second glue reservoir (102) communicates with at least two valves (32),
  - whereby the pressure in the third glue reservoir (103) is higher than in the second (102).

19. Method according to claim 18,  
characterized in that  
the at least one valve (105) that connects the second glue reservoir (102) with the  
third glue reservoir is opened and closed with the same frequency with which the  
bag components pass the gluing station (30, 100, 200).